UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

July 11, 2000

MEMORANDUM

SUBJECT: Dichlorvos - Response to Amvac letter of Jun 30, 2000
PC Code 084001; DP Barcode D267206

FROM: Susan V. Hummel, Branch Senior Scientist
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TO: Kimberly Lowe, Chemical Review Manager
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Amvac has submitted a supplement to their previous comments on the preliminary risk assessment for dichlorvos dated April 15, 2000. Their supplementary comments address the short term inhalation and dermal exposure scenarios and the toxicological endpoints used for those scenarios.

Amvac states that the preliminary risk assessment does not define the term "short term exposure scenario." They ask what exposure scenarios for dichlorvos uses are appropriately described as "short term." And they ask what toxicology study and endpoint should be used for risk assessment purposes for "short term" exposures to dichlorvos. Amvac states that the LOAEL identified from a developmental study in rabbits for "short term" dermal and inhalation toxicity is incorrect. Amvac believes that the residential spraying of a pressurized aerosol spray is not appropriately classified as "short term" because such an activity would not occur repeatedly for seven continuous days.

EPA Response

The toxicology issues are discussed in a memo by Dr. Sanjivani Diwan, dated July 6, 2000, and will not be further discussed here.

"Short term exposure defined" in several publically available documents on EPA's web site. A short-term exposure is defined as an exposure lasting from one to seven days. An intermediate-term exposure is defined as an exposure lasting from one week to several months.

The location of these documents is:

http://www.epa.gov/oppfead1/fqpa/SAP/sappap.htm
http://www.epa.gov/oppfead1/fqpa/1114mtng/rskasnov.htm

Additional documentation on the types of exposure scenarios and the endpoint selection process is found in the document, "Toxicology Endpoint Selection Process - A Guidance Document."

The types of exposure scenarios that are used for residential exposure assessment are short term (1-7 days), intermediate term (7 days to several months), and long term or chronic (several months to a lifetime). Most of the dichlorvos residential exposure scenarios are appropriately described as short term, exceptions are resin pest strips and pet flea collars which are long term exposure scenarios. A residential applicator using a pressurized aerosol spray can would be doing the application on one day or two (which is within the one to seven day exposure range for short term exposure) and the resident applicator would continue to be exposed post-application. For the post-application exposure, we expect the residues of dichlorvos to decline fairly rapidly over seven days.

The definitions of the exposure scenarios will be added to the Risk Assessment document.